CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT
GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	10/04/2017
Technical Reference	MORTH Table 400-11

	Sample-3		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.4**	
22.4	60-80	**73.4**	
11.2	40-60	**52.6**	
4.75	25-40	**35.2**	
2.36	15-30	**25.6**	
0.6	8-22	**17.4**	
0.075	0-8	**6.9**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LAB BANGALORE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT
GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	10/04/2017
Technical Reference	MORTH Table 400-11

	Sample-4		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.8**	
22.4	60-80	**72.5**	
11.2	40-60	**53.6**	
4.75	25-40	**34.5**	
2.36	15-30	**24.6**	
0.6	8-22	**18.8**	
0.075	0-8	**7.4**	

Note:

1.The results relate only to the items tested.

2.Report shall not be reproduced except in full, without the written approval of the lab.

3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	11/04/2017
Technical Reference	MORTH Table 400-11

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**97.5**	
22.4	60-80	**72.4**	
11.2	40-60	**53.6**	
4.75	25-40	**35.8**	
2.36	15-30	**26.8**	
0.6	8-22	**18.4**	
0.075	0-8	**7.1**	

Note:

1.The results relate only to the items tested.

2.Report shall not be reproduced except in full, without the written approval of the lab.

3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the customer.

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	11/04/2017
Technical Reference	MORTH Table 400-11

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.6**	
22.4	60-80	**73.4**	
11.2	40-60	**52.6**	
4.75	25-40	**33.8**	
2.36	15-30	**23.6**	
0.6	8-22	**16.6**	
0.075	0-8	**6.9**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	11/04/2017
Technical Reference	MORTH Table 400-11

	Sample-3		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.8**	
22.4	60-80	**72.4**	
11.2	40-60	**53.6**	
4.75	25-40	**34.8**	
2.36	15-30	**24.8**	
0.6	8-22	**17.8**	
0.075	0-8	**7.2**	

Note:

1.The results relate only to the items tested.

2.Report shall not be reproduced except in full, without the written approval of the lab.

3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	11/04/2017
Technical Reference	MORTH Table 400-11

	Sample-4		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**97.5**	
22.4	60-80	**73.6**	
11.2	40-60	**52.8**	
4.75	25-40	**35.6**	
2.36	15-30	**23.8**	
0.6	8-22	**18.4**	
0.075	0-8	**6.6**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

AEE

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

CIVIL TECH LABS

Accredited by **NABL** as per ISO/ IEC 17025 : 2005

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer,
Yelahanka Sub Division,
BBMP.

18th April 2017

Dear Sir,

Sub: Testing of Bituminous Macadam & Bituminous Concrete.

As requested, tests on physical properties were carried out for the Bituminous Macadam & Bituminous Concrete supplied by you, for the work of **'Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AE-1

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

TEST ON THE DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS MACADAM MIX-GRADE 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	14/04/2017

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	Test Method A (Centrifuge Method)	ASTM: D2172/ D2172M-11
2	Determination of amount of mineral matter/fines in the extract	Ashing Method	

B)

Specification: As Per MORTH (4th Revision) Table 500-4 BM-Grade -2, Bitumen Content for BM Grade-2 is 3.3 % TO 3.5 %		
Sl. No.	**Description**	**Values**
1	Weight of bituminous mixture before extraction test, W_1 g	2000
2	Weight of mineral aggregate obtained from centrifuge extractor, W_2 g	1920.6
3	Weight of mineral matter in the total volume of extract (by ashing), W_3 g	11.3
4	Total weight of aggregate in the bituminous mixture, W_4 g = (W_2 +W_3) g	1931.9
5	Total weight of Bitumen extracted from the mixture, W_5 g = (W_1-W_4) g	68.1
6	Bitumen content in %, (W_5/W_1) %	3.41

Remarks	**Satisfies the requirements.**

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	14/04/2017
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2011)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfies the requirement.**
19	90-100	**97.4**	
13.2	56-88	**72.4**	
4.75	16-36	**26.5**	
2.36	4-19	**16.8**	
0.3	2-10	**7.5**	
0.075	0-8	**6.6**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of the agency	M/s. Technical Manager (West), KRIDL
Date of Testing	14/04/2017
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfics the requirement.**
19	90-100	**98.5**	
13.2	56-88	**73.6**	
4.75	16-36	**27.4**	
2.36	4-19	**15.5**	
0.3	2-10	**8.3**	
0.075	0-8	**6.5**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS
5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

TEST ON DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS CONCRETE MIX-GRADE 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	18/04/2017

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	Test Method A (Centrifuge Method)	ASTM: D2172/ D2172M-11
2	Determination of amount of mineral matter/fines in the extract	Ashing Method	

B)

Specification: As Per MORTH (4th Revision) Table 500-18, Bitumen Content for BC Grade-2 is 5% to 7%		
Sl. No.	**Description**	**Values**
1	Weight of bituminous mixture before extraction test, W_1 g	2000.00
2	Weight of mineral aggregate obtained from centrifuge extractor, W_2 g	1870.62
3	Weight of mineral matter in the total volume of extract (by ashing), W_3 g	12.89
4	Total weight of aggregate in the bituminous mixture, W_4 g = (W_2 +W_3) g	1883.51
5	Total weight of Bitumen extracted from the mixture, W_5 g = (W_1-W_4) g	116.49
6	Bitumen content in %, (W_5/W_1) %	5.82

Remarks	**Satisfies the requirement.**

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

AEE

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LAB BANGALORE

CIVIL TECH LABS

5, 1st Gross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	18/04/2017
Technical Reference	IS : 2386(Part I)-1963 (Reaffirmed 2011)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirements**
13.2	79-100	**98.4**	
9.5	70-88	**81.4**	
4.75	53-71	**63.6**	
2.36	42-58	**46.5**	
1.18	34-48	**41.2**	
0.6	26-38	**33.5**	
0.3	18-28	**24.5**	
0.15	12-20	**18.6**	
0.075	4-10	**8.6**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

AEE

CIVIL TECH LABS

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Yelahanka Sub Division, BBMP.
Name of Work	Asphalting and Improvements to roads at Venkatala village in ward no. 01 of Yelahanka Sub Division.
Name of Agency	M/s. Technical Manager (West), KRIDL
Date of Testing	18/04/2017
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirements**
13.2	79-100	**97.5**	
9.5	70-88	**82.6**	
4.75	53-71	**64.5**	
2.36	42-58	**47.8**	
1.18	34-48	**40.5**	
0.6	26-38	**32.6**	
0.3	18-28	**23.8**	
0.15	12-20	**17.8**	
0.075	4-10	**8.9**	

Note:

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

AEE

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE